

ABSTRACT**MAGNETIC HEAD FOR HARD DISK DRIVE HAVING VARIED COMPOSITION****NICKEL-IRON ALLOY MAGNETIC POLES**

A magnetic head for a hard disk drive. The magnetic poles of the head are formed with a
5 NiFe alloy having a graduated composition in which a higher Fe concentration is fabricated
proximate the write gap layer between the magnetic poles. Each magnetic pole is fabricated in a
single electroplating step in which the duty cycle of the electroplating current is altered during
the electroplating operation. Where the duty cycle is greatest the Fe ion concentration is likewise
greatest.

10